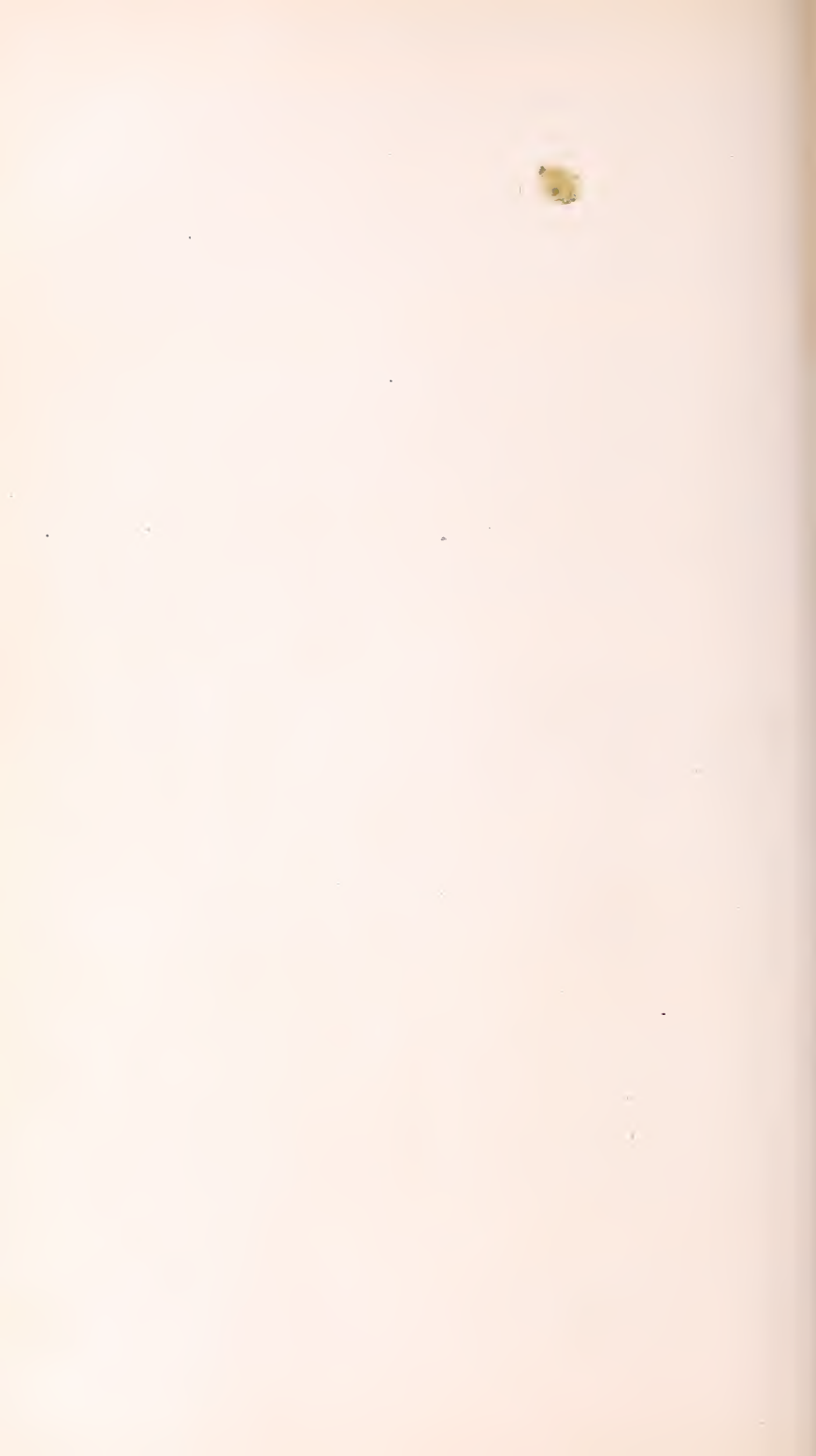




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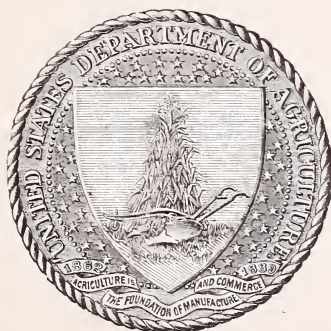
U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF STATISTICS.

OF WHAT SERVICE ARE STATISTICS
TO THE FARMER?

BY

JOHN HYDE

Statistician.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1898.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE STATISTICIAN,
Washington, D. C., April 21, 1898.

SIR: The accompanying article originally appeared in the Yearbook for 1897. It contains much that is of interest in regard to the work of the Division of Statistics and its relation to the farmer, as well as to the value of statistics in general, and its republication as a bulletin of this division is respectfully recommended. As such it will be suitable for general distribution, and it can be placed in the hands of many persons to whom it is impossible to supply the Yearbook because of the limited number of copies of that publication allotted to this office. No change has been made in the text of the article, but a new title has been given to it which seems more appropriate for the new form in which it is to appear.

Very respectfully,

JOHN HYDE,
Statistician.

Hon. JAMES WILSON,
Secretary.

OF WHAT SERVICE ARE STATISTICS TO THE FARMER?

By JOHN HYDE, *Statistician.*

INTRODUCTION.

By the employment of the statistical method in the aggregation of individual facts, conditions are determined and the operations of various natural laws are defined. The aggregations performed by this method are usually too large to be perceptible to the senses.

Men know by sight a bushel of wheat or potatoes, but practically they can know millions of bushels only by representative figures.

It would, therefore, appear that statistics are as necessary to our larger comprehension as are vision, touch, and other senses to our so-called personal knowledge of things. Their uses are various, but always of an importance corresponding to the necessities of our larger comprehension of the affairs to which they apply, and, as this comprehension is of the first importance in the conduct of all business that must concern itself with questions of demand and supply, so statistics are of first importance as the best means to the attainment of this complete knowledge of conditions.

Such being the character and importance of statistics in general, their particular relation to agriculture, the greatest and most widely distributed business of the world, employing the greatest capital and the largest amount of labor, is worthy of more than ordinary attention; and the more so because a business so vast, of such wide geographic distribution and so varied a character, can not be known in the extent and value of even its more important particulars or in their material effects on human relations except through the one means of the statistical method.

NECESSITY OF STATISTICS TO AGRICULTURE.

While the necessity of statistics to agriculture is unquestionable, there are far greater difficulties encountered in this application of them than in any other great department of the world's business. These difficulties spring in part from the character of the business itself, and in part from its minute subdivision of operations and its wide distribution. That it is far easier to ascertain the output of a group of mines or mills than of a group of farms representing the same value of investment or of product, is obvious.

These difficulties are such as can not be overcome by individual effort. It is not easy—it is rarely even practicable—for private initiative to conduct a statistical inquiry in a field so extensive as the United States. The volume of our agriculture, as well as its distribution, is so vast that the most interested private parties can never wholly measure it statistically.

It was perhaps the greater facility with which a complete and fairly accurate knowledge of the operations of large branches of business other than agriculture is obtained that gained for them their far earlier and more adequate recognition in legislation, the collection of agricultural statistics being for many years the work of an obscure section of one branch of a bureau in the Department of the Interior.

NEED OF A STATISTICAL OFFICE.

It will readily be inferred from the nature and distribution of the matters necessary to be ascertained in relation to agriculture as well

as from the impossibility of obtaining definite knowledge of them, either as to their extent or value, by any means not of continuous operation and of public direction, that a statistical bureau early became a necessity to that large portion of the industrial community represented by the Department of Agriculture. Such a branch of the Department has therefore been in continuous operation since 1863, and it is no disparagement to any other branch of the Department's operations to assert that some of the most general, the most diversified, and in the aggregate the greatest benefits which have accrued to the industries combined under the name of agriculture, through its representative department, have been the result of the knowledge obtained and disseminated through this statistical office.

If these benefits are not so direct and apparent as those derived from the investigations of the scientific men who tell the farmer how to suppress the insect enemies that infest his fields and orchards, how to eradicate the various diseases that affect his crops, what are the conditions under which the growth of particular products is most successfully promoted, what fertilizers to use and how to apply them, how the quality of his butter and cheese may be improved, and many other things of high practical value, still they are no less vital and far-reaching, and inevitably tend to increase the rewards of industry by the augmentation of production through the analysis of comparative results, by the maintenance of a reasonable equilibrium between supply and demand, and by contributing to stability of value through the reduction to a minimum of the risks involved in trading.

KNOWLEDGE OF MARKET CONDITIONS REQUIRED.

The American farmer is one of some five million persons who are cultivating our soil, in areas of from 3 acres to well up in the tens of thousands, for subsistence and other profit. Some products he consumes quite largely at home, in the maintenance of his family and hired help, and the keeping and fattening of farm animals. One or more products, however, he annually raises to sell. In some States cotton is the principal or the only money crop, in others wheat, while in not a few extensive regions of the country a wisely diversified system of farming yields varying quantities of many important products for which a market is available. But all that is raised in one place, whether for farm consumption or for local or distant market, has some relation to all that is raised elsewhere, and it is finally the amount of the supply relative to the extent of the demand which wholly or partially fixes the price and determines the profit or loss.

The all-important matter is how to secure a market, for, in spite of the suppression of pests, of the eradication of the diseases of plants, of a knowledge of the most favorable conditions of culture, of the most suitable and wisely applied fertilizers, and of a high standard of excellence in the product, without a market surplus production above

farm consumption is not simply valueless, but positive loss, to the extent of its cost in the use of land, implements, stock, fertilizers, seed, labor, and other expenses.

SERVICE OF DIVISION OF STATISTICS.

Without being specific as to details in a matter where details are inevitably to a large extent elusive, it is certain that statistical information widely and carefully gathered and properly presented and disseminated, relative to the condition and prospects and in due time to the actual measure of the principal products of agriculture, has the strongest influence in maintaining a reasonable equilibrium between production and demand, and the consequent assurance of profit to the producer.

In so far as statistics give timely information to producers of specific conditions affecting the marketing of products, such statistics do all that can be done, and what can not be done in any other way, to secure to agriculture a profit on its productions. It is too much to expect that this result will ever be attained with such sufficiency as to leave absolutely nothing to be desired; but so far as it is complete, the benefit secured is due to the statistical method, and will always require its service. What honest producers and interested consumers desire is relations which shall be of mutual benefit, and in the promotion of these relations the Division of Statistics of the Department of Agriculture has not only directly benefited agriculture to an incalculable extent, but, in doing this, has incidentally benefited all legitimate occupations and all consumers.

MAGNITUDE OF AGRICULTURAL INTERESTS.

It may be useful to examine into the extent and value of the interests to which agricultural statistics particularly relate, as further showing their utility, and to consider the numerical and business importance of our agricultural population, whose most vital interests are frequently affected by matters that can be definitely known only through statistics. The following table from the census of 1890 shows the number and classification of the agricultural population ten years of age and over:

Number and classification of the agricultural population ten years of age and over.

Occupation.	Male.	Female.	Total.
Farmers and planters	5, 055, 130	226, 427	5, 281, 557
Agricultural laborers	2, 556, 957	447, 104	3, 004, 061
Gardeners, florists, nurserymen, etc.	70, 186	2, 415	72, 601
Dairymen and dairywomen	16, 161	1, 734	17, 895
Other agricultural pursuits	19, 058	462	19, 520
Total	7, 717, 492	678, 142	18, 395, 634

¹This is 36.9 per cent of all persons having gainful occupations.

This population, comprising only actual workers, constitutes almost $13\frac{1}{2}$ per cent of the entire population of the United States at the last census, and represents in families probably more than a third of the total number of inhabitants. Numerically, at least, its needs in the prosecution and protection of its endeavors are especially worthy of attention. Its investments in land, implements, and live stock are enormous, the value of farm lands, fences, and buildings being \$13,279,252,649; that of implements and machines, \$494,247,467, and that of live stock (on farms only) \$2,208,767,573, a total of \$15,982,267,689, or nearly 25 per cent of the total estimated wealth of the country. Thus, interests represented in a third of our population and a fourth of our national wealth are the direct interests of agriculture.

The value of the products of agriculture in 1889 is stated in the census of 1890 to be \$2,460,107,454, and the estimate is acknowledged to be considerably below the actual facts. Of many elements of these enormous values, the agricultural statistics of the Department of Agriculture take annual, monthly, or other account, as required by the frequent changes in their status. Many matters of information that are of vital interest to agriculture, which the census gives once in ten years, as an indication of our progress as a nation, together with much that the census necessarily omits, are given to the public monthly, or as occasion requires, through this division, as freshly collected news of current importance, and thus the national record of progress as regards the business that is in greater or less degree the foundation of all other human industry becomes an annual one.

The first statistics of agriculture published by this Department were those of a census taken three years before, and under a date that was itself a year old. At that time there was no agency for the annual gathering of farm statistics and no organization for the publication of facts relative to agricultural production or distribution, while those facts were alive with meaning and influence. Now, periodic conditions of growth and quality, and finally the amount of production, are recorded by the farmers themselves in all parts of the Union, and are tabulated and published from their returns by this division. The advantage to the farmer is just as certain as it is incalculable, and it is sure to increase with the perfection of the statistical methods employed.

ILLUSTRATION OF THE VALUE OF STATISTICS.

The fluctuation in the values of live stock, as well as of other farm property, during the last five years strikingly demonstrates the utility of reliable periodic statistics.

For many years this division has annually published, as of the first of January, a carefully prepared statement of the number and value of the principal farm animals, as horses, mules, cattle, sheep, and swine.

It is well known that the year 1893 witnessed the beginning of a period of almost unexampled depression throughout the United States in all branches of business, and that recovery from it did not begin to appear until 1897. While statistics covering the full extent and results of this depression are, in the nature of the case, unobtainable, statistics gathered periodically for other purposes, but yet furnishing a measure of the value-destroying influence of such depression in definite instances and to a definite extent, must be of value.

Thus, a comparison of the numbers and values of farm animals, as contained in the published statistics of this division for 1893, 1896, and 1897, the years in which the depression began, culminated, and seemingly began to disappear, will show the estimated losses of value (out of all proportion, in most cases, to the actual numerical decrease) indicated by the scores of thousands of reports received by the Department in January of each year from its State, county, and township correspondents in all parts of the country.

Unless there were a statistical organization to collect and publish these facts annually nothing definite could be known of the extent or progress of this great interest, except to speculators interested in it in a large way, nothing of its relative value as property, nothing of the effects upon it of economic changes, and consequently no clear deductions could be drawn as to the influences of public policy on private business. The following table shows the number and value of farm animals in the United States, with particular reference to fluctuations in value and numbers:

Number and value of farm animals in the United States, 1893 to 1898, showing particularly fluctuations in value and numbers.

January 1—	Total value of live stock.	Horses.		Mules.		Sheep.	
		Number.	Value.	Number.	Value.	Number.	Value.
1893.....	\$2,483,506,681	16,206,802	\$992,225,185	2,331,128	\$164,763,751	47,273,553	\$125,909,264
1894.....	2,170,816,754	16,081,139	769,224,799	2,352,231	146,232,811	45,048,017	89,186,110
1895.....	1,819,446,306	15,893,318	576,730,580	2,333,108	110,927,834	42,294,064	66,685,767
1896.....	1,727,926,084	15,124,057	500,140,186	2,278,946	103,204,457	38,298,783	65,167,735
1897.....	1,655,414,612	14,364,667	452,649,396	2,215,654	92,302,090	36,818,643	67,020,942
Decrease, 1893 to 1897 ¹	828,092,069	1,842,135	539,575,789	115,474	72,461,661	10,454,910	58,888,322
Per cent of in- crease or de- crease, 1893 to 1897.....	—33.3	—11.4	—54.4	—5.0	—44.0	—22.1	—46.8
1898.....	1,891,577,471	13,960,911	478,362,407	2,257,665	99,032,062	37,656,960	92,721,133
Per cent of in- crease or de- crease, 1897 to 1898.....	+14.3	—2.8	+5.7	+1.9	+7.3	+2.3	+38.3

¹ Intervening years show gradation of change.

Number and value of farm animals in the United States, 1893 to 1898, showing particularly fluctuations in value and numbers—Continued.

January 1—	Cattle.				Swine.	
	Milch cows.		Other cattle.			
	Number.	Value.	Number.	Value.	Number.	Value.
1893.....	16,424,087	\$357,299,785	35,954,196	2547,882,204	46,094,807	\$295,426,492
1894.....	16,487,400	358,998,661	36,608,168	536,789,747	45,206,498	270,384,626
1895.....	16,504,629	362,601,729	34,364,216	482,999,129	44,165,716	219,501,267
1896.....	16,137,586	363,955,545	32,085,409	508,928,416	42,842,759	186,529,745
1897.....	15,941,727	369,239,993	30,508,408	507,929,421	40,600,276	166,272,770
Decrease, 1893 to 1897 ¹	482,360	² 11,940,208	5,445,788	39,952,783	5,494,531	129,153,722
Per cent of in- crease or de- crease, 1893 to 1897.....	—2.9	² +3.2	—15.1	—7.3	—11.9	—43.7
1898.....	15,840,886	434,813,826	29,264,197	612,296,634	39,759,993	174,351,409
Per cent of in- crease or de- crease, 1897 to 1898.....	—0.6	+17.8	—4.1	+20.5	—2.1	+4.9

¹ Intervening years show gradation of change.

² The only increase.

It should be stated that the decrease in the value of horses (the greatest shown in the above table), in so far at least as it exceeds the average decrease of all, may be attributed to the rapid extension of the use of electricity on street-car lines and otherwise during the period considered. The cause or causes of the decline in the number and value of farm stock in general must be sought elsewhere as affecting the status of all classes of property.

But the present purpose is to illustrate the value of statistics to agriculture in presenting facts of the most far-reaching consequence through the only possible method. If the assertion were ventured without proof that our farm stock of all kinds had decreased in number nearly 14 per cent (23,835,198) and in value 33.3 per cent (\$828,092,069), or over four-fifths of a billion dollars, during five years normally free from epizootics, years of profound peace and of natural growth of population and demand, the statement would gain little credence and exert no influence. Proved, it can scarcely fail to excite the most widespread interest and give occasion for the most serious reflection.

Among other services rendered by statistics to agriculture may be mentioned the statistical demonstration and measurement of the advantage accruing from the use of machinery as compared with human labor, and also the definite ascertainment of the extent to which production is increased by the use of fertilizers.

There is, however, a service still more important. The more closely the production of any given crop is ascertained—in other words, the less the uncertainty existing as to the amount available for consumption and export—the smaller will be the risk attending the operations

of the merchant and trader, the less will be the inducement to speculation, and the more stable will be the value of the commodity. In every sphere of human thought uncertainty is the mother of speculation; in every field of human activity great risks call for large profits.

Herein lies the current value of agricultural statistics—that they reveal true conditions in ascertained measure and furnish in large matters the only basis for comparisons. From such conditions and comparisons logical deductions can be made for individual guidance.

It is in this view that these and related statistics are continually being gathered, arranged, and published by this division, and the information thus regularly made public is in constant demand.

UTILITY OF FOREIGN STATISTICS.

What has so far been stated has particular reference to domestic statistics, furnished through this division. To much of it, however, may be given a wider application. Our insufficient production of certain agricultural commodities and our surplus production of certain others have a relation to foreign markets, if these commodities are imported or exported, and the collection and study of facts relating to production, consumption, and market prices in other countries becomes an important part of our duty toward our own agriculture.

This consideration of foreign production and consumption enables us to determine with reasonable accuracy the demand that will be made upon our surplus, if any, in the current or ensuing year, or the supply that can be furnished us to meet our own requirements. This kind of information relates principally, of course, to agricultural commodities subject to competition, and which are the products of our own and other countries in constantly varying amounts and proportions; and as demand and supply regulate prices, such information is of manifest importance both to producers and consumers. These supplemental statistics of foreign production, correlated with our own, often foretell approximately the measure of our own profit or loss.

An illustration of the benefit to our agriculturists which may be derived from foreign statistics is furnished by certain ascertained facts relative to the production of wheat in Argentina. The statistics of wheat production in that country for a series of years are as follows:

Statistics of wheat production in Argentina from 1890 to 1896.

Year.	Production.	Exports.	Consumption.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1890-1891	32,000,000	14,400,000	17,600,000
1891-1892	34,000,000	16,800,000	17,200,000
1892-1893	58,000,000	33,600,000	24,400,000
1893-1894	84,000,000	56,000,000	28,000,000
1894-1895	60,000,000	35,600,000	24,400,000
1895-1896	44,000,000	18,000,000	26,000,000
1896-1897	28,000,000	4,000,000	24,000,000
Average	48,666,666	25,500,000	23,166,666

These figures show a range of production in seven years from 28,000,000 bushels in 1896-97 from an estimated area of 5,200,000 acres to 84,000,000 bushels in 1893-94 from about 4,600,000 acres, and an annual yield per acre ranging from about 5.4 bushels to apparently 18.2 bushels.¹ The area in wheat in 1884-85 was 1,000,000 acres; in 1890-91, 3,100,000 acres, and in 1896-97, 5,200,000 acres, according to the report of an expert correspondent of the Northwestern Miller. The acreage and yield in 1888-89, according to Argentine official statistics, were, respectively, 2,036,254 acres and 19,690,575 bushels, 91 per cent being in four provinces. The yield that year averaged not quite 9.7 bushels per acre.

In 1888 Pennsylvania, upon 31.6 per cent less land than this, raised only 4.5 per cent less wheat, at an average rate of $13\frac{1}{2}$ bushels per acre; one of our own States, in which wheat is not the principal farm product, thus producing nearly as much as the whole of Argentina in a year in which its own production fell below the average.

Last year (1897) the wheat production of the single State of Kansas was almost equal to the average Argentine crop of the last seven years, while that of Minnesota exceeded it by 23 per cent.

These are some of the principal statistical data relative to wheat production in Argentina, with a few facts concerning one or two of our own States by way of comparison. Such statistics would be of no particular importance but for the widespread fear of Argentine wheat as a competitor of our own product in the markets of the world, destined, we have been assured, to finally drive it from the field. Such a threat, handled by skillful speculators, and combined with similar terrors as to Russian surplusage, has not been without influence on our markets, and the statistics of Argentine production are therefore especially worthy of consideration.

QUALIFYING FACTS REGARDING FOREIGN STATISTICS.

It is just here that an element not necessarily statistical must enter into the consideration of foreign statistics of competitive products, such as the leading cereals, if we would arrive at correct conclusions—an element which generally enters easily and naturally into the consideration of domestic statistics. This is an element of qualifying conditions, sometimes capable of statistical proof, as in the case of climate, but not infrequently insusceptible of statistical expression. We know in a broad sense, at least, and of personal or hand to hand knowledge, the conditions of wheat culture at home, and we can judge of statistics of its production, consumption, surplus, price, etc., without, perhaps, deliberately referring to such knowledge in arriving at our conclusions. It will not, however, do to omit this in consider-

¹ Crop statistics for Argentina can scarcely be regarded as furnishing conclusive evidence that so high an average yield as 18.2 bushels of wheat per acre was ever actually attained in that country. All the probabilities are against it.

ing corresponding foreign statistics, but the value of statistical facts, at least their value in relation to similar domestic facts, must be carefully weighed by taking into account all important related facts and circumstances. It will be seen, if this be true, and admitting the importance to us of foreign agricultural statistics, how necessary it often becomes that qualifying facts be carefully and intelligently weighed by the statistician. The performance of this duty to our own people can not be delegated to ignorance and inexperience, or to those pecuniarily interested.

Briefly, then, the statistical showing relative to Argentine wheat is qualified as to the future by the following facts, not statistical, but of official authority and from Argentine sources:

(1) Wheat raising was unknown as a regular branch of farming until the introduction of subsidized immigration in 1882, and production has greatly decreased with the emigration of foreigners since 1893, the business being principally one of their institution.

(2) It is mostly confined to four provinces—Santa Fe, Buenos Ayres, Entre Rios, and Cordoba—which, with over three-fourths of the cultivated land in the country, produce over 90 per cent of the wheat, and which alone among the provinces are suited to its extended cultivation.

(3) Santa Fe and Entre Rios are inland and alluvial, possessing the best conditions of location and soil in the country for continuous successful culture. Buenos Ayres is littoral and subject to destructive pamperos, equivalent to northeast storms in the United States. Both this province and Cordoba have a poor, thin soil, the fertility of which rapidly diminishes under grain-cropping, in the absence of artificial fertilization.

(4) One year out of three (or even two out of five) is practically a year of failure in cereal production here or there in the provinces, as a result of pamperos, droughts, or locusts.

(5) The United States has more than once increased its wheat acreage in two years by an area greater than the largest total area ever devoted to that crop in Argentina.

The statistics alone in this case show the yield of the Argentine wheat fields year by year for a series of seven years, and the amounts annually consumed and exported; also the averages of these for the entire period. Incidentally they show an extreme variation in yield of 56,000,000 bushels, or 7,400,000 bushels more than the average yield; also that the average annual production is about 2,400,000 bushels more than double the home consumption, and about 2,400,000 bushels less than double the average amount of the exports. Further, they show a steady decrease in production from 1893-94 to 1896-97, culminating in a decrease of 56,000,000 bushels, and an export of only 4,000,000 against an export of 56,000,000 bushels three years before, and an annual average for the preceding six years of

29,066,666 bushels. These statistics, taken in conjunction with those of acreage, show that the decrease in production has accompanied an increase in acreage, and that the lowest aggregate production has been from the largest acreage.

PROOF OF THE VALUE OF STATISTICS.

Of the nonstatistical facts in the preceding paragraphs 1, 2, 3, and 4, each throws its particular light upon the Argentine wheat question, as set forth statistically in the table, and helps to determine its importance as regards competition in the markets of the world. The conclusions to be drawn from the total sum of statistical and nonstatistical facts need not be dwelt upon further than to state that, in view of the sudden rise of a considerable wheat industry in a comparatively new and very extensive country and of the claims and expectations based thereon, it is of particular interest to the farmers of the United States to ascertain the exact status of that industry, and, as far as may be, the limits of its possible extension; that such knowledge must at least have a statistical basis; and that to be entirely assuring, this statistical basis should be accompanied by certain nonstatistical information not within the general knowledge.

If the apparent result of this primarily statistical statement is an assurance that Argentine wheat can never become a really serious competitor of our own, that product is effectually eliminated from future consideration as a serious disturber of prices, and the knowledge of this fact is only of less value to our wheat raisers than is the fact that speculators are thus deprived of one of the greatest advantages they have enjoyed in their manipulations of the markets.

This illustration of the use and value of foreign statistics goes necessarily into some detail, and is somewhat out of proportion to the article of which it forms a part. It is given for the purpose of showing, first, the advantage accruing to our farmers from a clear understanding as to competitive, or possibly competitive, foreign production; and second, that they may see that the task is not an entirely simple one which devolves upon the statistician who honestly and vigilantly seeks to protect their interests.

That the making of estimates and the free discussion of anything in the way of a numerical statement are very dear to the heart of the American people, we have innumerable evidences entirely outside of the domain of agriculture. Almost anyone, however, can make some sort of an estimate and obtain the true arithmetical aggregates of tabulations. But, while in the working out of statistical results everything in the nature of necromancy or even of mystery should be carefully avoided, a broader knowledge of the matters to which statistical data relate than comes of their mere handling is not infrequently of vital importance.

The benefits conferred upon agriculture by statistics, great as they are, have no more attained their full limits than has agriculture attained its full development. In any consideration of the subject, therefore, this important fact must be taken into account. In addition to the enormous advantages already accruing, it is not too much to expect that through the gradual utilization of whatever knowledge of physical conditions and of human needs, susceptible of numerical expression, may be available, and the careful setting forth of its precise relation to the great business of agriculture, the statistician of the future will be able to promote the agricultural interests of the country in directions that as yet are hardly dreamed of.

Even if we consider, however, only the present scope and importance of statistical investigation as applied to the vast, the highly diversified, and the ever-changing agricultural conditions of a country like the United States, and keep in mind the fact that the experience of the present and the past will enormously influence the judgments and labors of the future, it will surely be evident to every thinking man that there is no true economy in the curtailment of this work by depriving it of the means by which alone it can accomplish its important purpose.

PROMPT AND WIDE DISTRIBUTION OF STATISTICS THE AIM OF THE DIVISION.

If agricultural statistics are of any value in themselves, their timely availability for the use of those to whom they are of particular interest becomes a matter of importance. They would be of no value to farmers, but might even be positively detrimental to their interests, if possessed by only a few persons or restricted to commercial circles. It is, therefore, the aim of the Division of Statistics in the Department of Agriculture to make the widest possible distribution of the information received through its various agencies, and to make such distribution as prompt and speedy as the necessity of securing reasonable accuracy will admit of. The monthly crop reports of this division are therefore mailed with as little delay as possible to the Department's State statistical agents and the 7,500 persons who report to them, to the 2,400 county correspondents and the 6,800 persons who report to them, to the 40,000 township or district correspondents, to 12,500 cotton planters, to 1,200 newspapers, mostly rural, and to 120,000 other persons, the individual recipients, both correspondents and noncorrespondents, being mainly farmers. These reports relate, according to the season of the year, to the conditions of soil, weather, planting, growth, harvesting, yield, quality, transportation, markets, and prices. They are sent regularly and gratuitously to all persons who have taken the trouble to ask for them, and however susceptible of improvement they may be in any particular respect, the great

demand for them leaves little doubt that considerable value is set upon them. When the statistical information received by the Department is made still more promptly available for the use of farmers by being bulletined in rural post-offices, and the information itself is made still more reliable by the institution of certain changes in the crop-reporting system, there will surely be no single division of any Government department, and certainly no independent organization, that will be promoting so greatly and so generally the agricultural interests of the country.



